



# Journal of the AUDIO ENGINEERING SOCIETY

## CALL for PAPERS SPECIAL ISSUE AUDIO FILTER DESIGN



We are pleased to announce a Special Issue of the Journal of the Audio Engineering Society (<http://www.aes.org/journal/>) on the subject of Audio Filter Design.

Digital filters have an extensive role in audio applications such as sound synthesis, audio effects, spatial sound, and processing of microphone and/or speaker signals. Audio filter design is especially challenging since the final judge of quality is the human ear, and this is usually respected in the error criteria minimized.

In this special issue we would like to disseminate recently accumulated knowledge in this field, including topics such as the following:

- Perceptual preprocessing, error criteria and optimization techniques for audio filter design
- Parametric and graphic equalizers
- Filter design for audio effects and artificial reverberation
- Filter design for sound synthesis and physical modeling
- Loudspeaker processing: digital crossovers and equalization
- Equalization of headphones, loudspeakers, and mobile devices
- Room equalization

- Microphone/speaker array processing: beamforming, implementation of sound zones
- Binaural processing: crosstalk cancellation, HRTF modeling
- Spatial audio: filter design for ambisonics, WFS, and specifically optimized layouts
- Audio filter banks, auditory processing, filter design for hearing aids

Submissions will be judged based on their academic quality, novelty, and relevance to the topic of audio filter design. Prospective authors seeking a read on relevance in advance are encouraged to contact the lead Guest Editor, Balázs Bank ([bank@mit.bme.hu](mailto:bank@mit.bme.hu)). All questions related to the special issue are welcomed by the editorial team.

### GUEST EDITORS

Balázs Bank (Budapest University of Technology and Economics, Hungary)

Federico Fontana (University of Udine, Italy)

Julius O. Smith (Stanford University, USA)

## AUTHOR GUIDELINES

We welcome original research and tutorials, as well as revised and expanded versions of AES conference papers addressing the theme of this special issue. Please follow the Author Guidelines found at: <http://www.aes.org/journal/authors/guidelines/>. Papers should be submitted online at: <http://www.aes.org/journal/submit/>. All submissions will be peer-reviewed according to standard JAES review procedures. JAES offers an Open Access (OA) publishing option to its authors.

**Submission deadline: November 1<sup>st</sup>, 2021**

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